DOCUMENT RESUME

ED 204 023 PS 012 263

AUTHOR Kotsonis, Miriam E.
TITLE Children's Comprehension of Conversationally Implied Meanings.
PUB DATE Apr 81
NOTE 13p.: Paper presented at the Biennial Meeting of the Society for Research in Child Development (Boston, MA, April 2-5, 1981).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Age Differences: *Children: Elementary Education: *Interpretive Skills: *Language Processing: *Listening Comprehension: *Oral Language: Reaction Time
IDENTIFIERS *Indirect Speech: *Inference Skills

ABSTRACT

The ability of kindergarten, second and fourth grade children (N=90) to interpret meanings related to two categories of conversational implicature, bridges and flouts, was investigated. Bridges and flouts are types of indirect reply to a speaker's utterances that require a hearer to infer the reply's relevance to the preceeding conversation. Each child was told that he or she would hear short stories on tape about grownups. In each story, one person would ask the other whether he or she liked something. Answers given were either explicit or were implicit in the form of bridges or flouts. The child's task was to decide whether the second person liked or disliked the thing he or she had been asked about. Each child heard 20 test items of which four were explicit, eight were bridges, and eight were flouts. Items of each type were evenly divided in terms of whether the speaker did or did not like the topic under discussion. Dependent measures were the adequacy of children's interpretations and response latency. Results indicated (1) increasing accuracy of judgments with age: (2) a sequence of increasing difficulty in interpreting explicit replies through bridges to flouts for all ages: (3) an age by utterance type interaction with older children who were more competent on the more difficult forms than were younger children: and (4) increases in response latency scores by difficulty of utterance type but not by age, suggesting that all the children recognized the implicit items, particularly flouts, as departing from their expectations. (Author/RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
[X] This document has been reproduced as received from the person or organization originating it.
[ ] Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Miriam E. Kotsonis
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED2040023

PS012263

CHILDREN'S COMPREHENSION OF CONVERSATIONALLY IMPLIED MEANINGS

Miriam E. Kotsonis

University of Virginia

current address:

Bell Telephone Laboratories
Crawfords Corner Road
Holmdel, N.J. 07733

Paper presented at the Biennial Meeting of the Society for Research in Child Development, Boston, Mass., April, 1981.

This report is taken from a dissertation prepared by the author in partial fulfillment of the requirements for the Ph.D. degree. A more extensive report is currently in preparation.

I am grateful for the help of my dissertation advisor, Dr. Charlotte Patterson, my research assistants, and the Cliffside Park New Jersey Public School System.

CHILDREN'S COMPREHENSION OF CONVERSATIONALLY-IMPLIED MEANINGS

SRCD - April, 1981 Miriam E. Kotsonis

I would like to talk to you today about work that I have recently completed, with Charlotte Patterson as my advisor, studying children's understanding of implied meanings in conversation. We used a listening game format to study the ability of children, aged 6, 8, and 10, to interpret meanings that were implied in conversations among fictitious adults.

This interpretive ability involves the development of pragmatic communication skills; specifically, the ability to make use of certain conversational expectations to understand what a speaker means.

As adults, we have learned to make use of these shared expectations. This pragmatic competence enables us both to express ourselves in a variety of ways and to interpret the meanings of others. For example, if someone asks me, "Did you like Nancy's party?", I can reply rather explicitly, "No, I didn't." I can also convey my meaning in a more implicit way: "I could hardly wait to go home." This example leaves the listener--whose conversational expectation is that the speaker is being relevant--to bridge the gap and supply the verdict. Another, more roundabout reply (and there are many ways to give a roundabout reply) could be, "Well, her table was set nicely." Here, the expectations themselves are being blatantly played with--or "flouted"--and the speaker condemns the party by faintly praising something else.

Most adults can interpret such messages; in our study, we investigated the development of understanding of these conversational implicatures among elementary school children.

The work of Grice provided us with a helpful starting point. He discusses the kinds of shared pragmatic expectations that people may use, in order to interpret utterances. He suggests that, if a conversation is in good faith, there are several general rules or maxims that people expect to be followed:

telling the truth, telling all that the listener needs to know and not more, saying things that are relevant, and making the utterance clear and unambiguous. These rules are not meant to exhaust the possibilities for conversation. But rather, Grice claims, the standard rules serve as a comparison point against which deviations can be recognized and interpreted. He argues that such deviations give rise to "conversational implicatures," interpretations which the speaker intends that the listener draw from the rule-deviating utterance.

Grice outlines several main types of conversational implicatures, and we focused on 2 of these for our study. The first type is made up of utterances in which there is no clear violation of a maxim, but the listener must assume that the speaker has been relevant, and must bridge a gap to supply the connection. In the example I gave earlier about the party, a "bridging" response would be, "I couldn't wait to go home." Two other examples of bridging utterances are on your handouts, along with the stories which we used for our study.

Another main type of conversational implicature is what Grice called a "flout." This is a heterogeneous category, involving blatant exploitation of a maxim, in order to make an implication. Flouts can be ironic, hyperbolic, metaphoric; they can achieve their meaning by giving too much or too little information, or by making a seemingly irrelevant comment. In the example about the party, the flouting response would be, "Well, the table was set nicely." Two other examples are given on your handouts.

To summarize, the present study investigated comprehension of 2 main categories of implicatures: bridges and flouts. We included a third category of utterances, which we called "explicit" items, to provide a basis for comparison.

We do have some information about children's use and comprehension of indirect utterances. Investigators such as Garvey, Ervin-Tripp, and the Kernans have shown that both competencies increase with age in early childhood. Consistent with Grice's analysis, their work indicates that there are real

differences in the difficulty of various forms of indirect utterances.

Research dealing with children's pragmatic competencies beyond the pre-school years has begun to give information about comprehension of implied meanings. For example, Brian Ackerman has found that first and second-graders, but not kindergartners, could discriminate between rule-conforming, explicit utterances and items that exploited expectations regarding relevance, contingency, or informativeness. However, it was not until children were 8 or 9 that they could correctly infer the speaker's intended meaning.

The present study attempts to give additional information about the development of this ability. Let me tell you about our procedure.

We had 90 subjects, thirty each from kindergarten, second, and fourth grades, from a public school system. Children were tested individually. Each child was told that he or she would hear short stories about grownups on tape. In each story, one person would ask the other whether he or she liked something, and the 2nd person would answer. The child's task was to decide whether the second person, that is, the target speaker, liked or disliked the thing he or she had been asked about. Then, the child was to indicate the decision by ringing a push-bell next to a picture of a smiling or a frowning face. Children were given practice items and an interview, to make sure that they understood the procedure. In addition, to help children follow the conversation and identify the target speaker, we used a felt board with colored figures--for example, Mr. Green and Mrs. Orange--for each story.

Each child heard 20 test items, of which 4 were explicit, 8 were bridges, and 8 were flouts. Half the items of each type indicated that the speaker liked the topic under discussion, and half, that the speaker did not like it. This was done to minimize the effect of possible response biases.

We used 5 separate scripts of 20 items each, and children were

randomly assigned, within grade and sex, to hear one of the scripts. Thus we had a large item pool, 100 items, which was intended to reduce the influence of item-specific variability and to enhance the generalizability of results. We validated these items with adults, and obtained a 99% average agreement in interpretation of them.

To summarize, children each heard 20 stories, like the ones on your handout. Our main dependent measures were the adequacy of children's interpretations of the utterances, that is, did they judge them as expressing liking or disliking in the same way that adults did?, and response latency, or the time it took for the child to decide. For each item, children were also asked to answer factual questions about what they had heard, as a check on attention, and to explain their answers.

Now, our results. As expected, there was increasing accuracy of judgments with age. Also, at all ages, flouts were more difficult to interpret than bridges, and bridges were more difficult than explicit replies.

Our most interesting results, however, are in the age by utterance type interaction. This indicated that the three utterance types were of differential difficulty for the three age groups. If you'll turn to your handouts, you will see on the first graph the percent of correct interpretations plotted for each of the utterance types. As you see, explicit items were interpreted correctly by virtually all the children. Bridges were somewhat more difficult than explicit items, especially for younger children. And flouts gave all our subjects considerable difficulty, with even the fourth-graders achieving a far from perfect score. The second graph looks at the same results from the perspective of individual children's performances. We established criteria for competence--beyond chance--in interpreting each kind of utterance, and plotted the percent of children who met these criteria for each utterance type. For explicit utterances, the criterion was 4 out of

4 correct interpretations; for bridges and flouts it was 7 or 8 out of 8 possible correct interpretations. As you see, using these stringent criteria, the results are essentially the same. We can see more clearly, however, that only one kindergartner was able to deal with the flouts at this level of competence, compared with 8 second-graders and 15 fourth-graders.

Now, if you will turn to the third graph--for response latencies--this one looks rather different. Plotting the response time in seconds for each of the three utterance types, there is only a main effect for utterance type. That is to say, in general, children of all 3 ages responded most quickly to explicit items, then to bridging items, and took longest for flouting items. This result is very interesting in light of the interpretation data presented earlier. It suggests that, at some level, all the children were recognizing the implicit items, particularly the flouts, as departing from their expectations. But only the older children were able to give consistently the correct interpretation. I shall return to this point in a moment. First, I would like to present our subsidiary results.

We measured children's attention using fact-recognition questions. Analysis of these data showed that attention differences accounted for very little of the variance in judgments; levels of attention for all 3 age groups were very high. With regard to the 5 different sets of items, or scripts, that children were assigned to hear: on some analyses there was an overall effect for script assignment. However, post-hoc tests showed that no script consistently differed from any of the others. Finally, we found that the quality of justifications improved with age, most markedly for flouts.

To summarize the results, we found that, over the range from 6 to 10 years, comprehension of conversational implicatures improves with age. As evidenced by the reaction time data, children at all 3 ages appeared to discriminate flouts as "different" in some way; however, only the

older children supplied the correct interpretations for these flouts. Additional research is needed to determine whether younger children's difficulties in interpretation stem from self-monitoring deficits--that is, they had not learned to "read" their own uncertainty as a cue that an utterance might be implicit; or perhaps, that these difficulties arise simply because younger children have not yet learned social conventions for interpreting utterances that are discrepant from conversational expectations.

Our results accord well with those of previous investigations. Developmental changes in interpretive ability were obtained, and we also found substantial differences among types of conversational implicatures. In addition, we varied utterance type systematically, using a large and varied pool of items, involving expressions of both liking and disliking, and including an item-by-item measure of children's attention.

An important direction for future research will be to investigate children's interpretive abilities in more naturalistic settings, where richer contextual cues are available to the children. Information is also needed about children's production of conversational implicatures.

In conclusion, I would like to say that I view communication skills as an integral part of social cognition. The interpretations which people make in their communicative interactions will influence many of the inferences that they make about their social environments. Studying the development of comprehension of implied meanings provides a useful perspective on the development of social cognition, and one which stresses the interactive nature of this development.

Table 1

Examples of Practice and Experimental Items

Practice Item (Number 3)

This story is about Mr. Green and Mrs. Orange. Mr. Green sees Mrs. Orange at the supermarket and asks her: Do you like to go shopping? Mrs. Orange says: Yes, I really like it a lot.

Test Items

Explicit-Rule Conforming ("Explicit")

EP: explicit positive form (SC2, item 13)

This story is about Mr. Blue and Mrs. Red. They are standing on the sidewalk and talking. Mrs. Red asks: How did you like the mystery book you were reading? Mr. Blue says: It was really excellent.

EN: explicit negative form (SC5, item 11)

This story is about Mr. Brown and Mrs. Blue. They are in Mrs. Blue's living room. Mrs. Blue asks: Do you like rock and roll music? Mr. Brown says: I don't like it at all.

Implicit-Rule Conforming ("Bridging")

BP: Bridging positive form (SC1, item 1)

This story is about Mr. Blue and Mrs. Orange. They are at the library. Mr. Bl[illegible]asks: Do you like reading science books? Mrs. Orange says: I read them every chance I get.

Table 1 (Continued)

BN: bridging negative form (SC4, item 1)

This story is about Mr. Blue and Mrs. Red. They are standing on the sidewalk and talking. Mr. Blue asks: How was your vacation in Florida? Mrs. Red says: I had a bad cold the whole time.

Implicit-Rule Flouting ("Flouting")

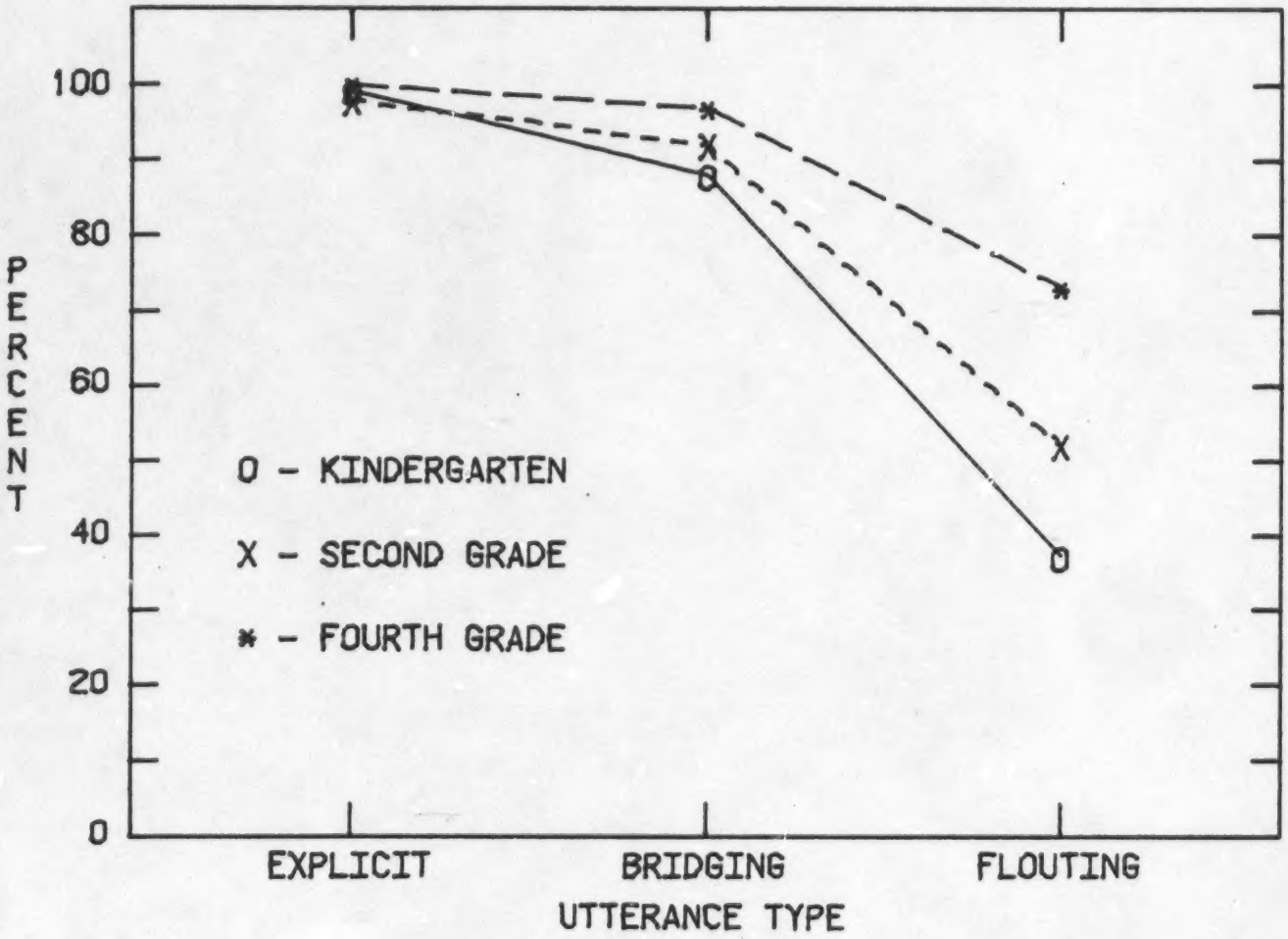
FP: flouting positive form (SC5, item 17)

This story is about Mr. Green and Mrs. Red. They are friends and they see each other at the shopping center. Mrs. Red asks: Do you like going to New York City? Mr. Green says: No more than 7 days a week!

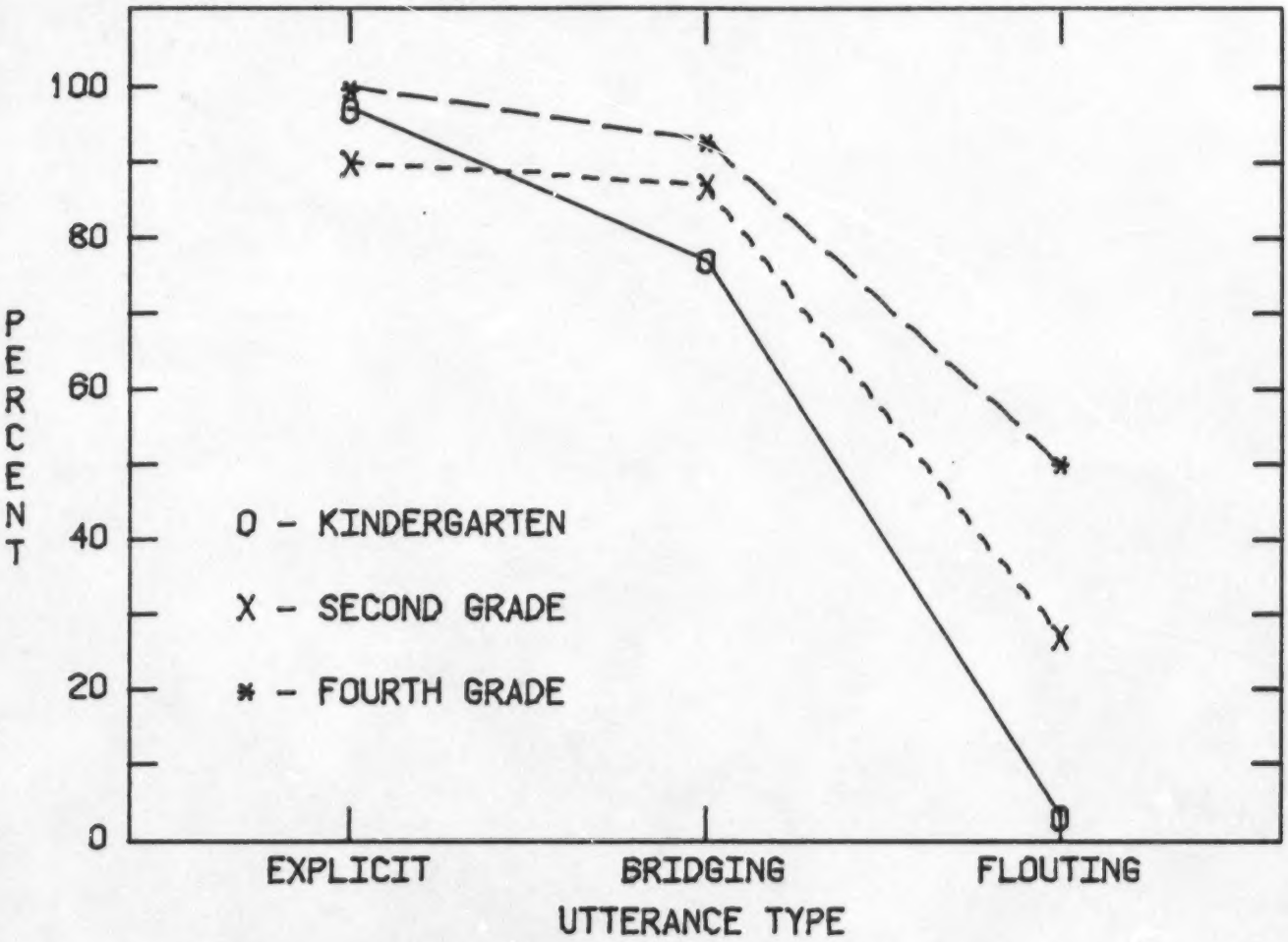
FN: flouting negative form (SC2, item 14)

This story is about Mr. Brown and Mrs. Green. They are waiting at the shoe store and they are talking. Mr. Brown asks: How did you like Sally's singing at the concert? Mrs. Green says: Her dress was a nice color.

MEAN PERCENT OF CORRECT INTERPRETATIONS
FOR EACH UTTERANCE TYPE, BY GRADE



PERCENT OF CHILDREN WHO MET CRITERIA*
FOR CORRECT INTERPRETATION OF UTTERANCES, BY GRADE



*CRITERIA
EXPLICIT (4 ITEMS): 4 CORRECT, P < .0625
BRIDGING (8 ITEMS): 7-8 CORRECT, P < .0351
FLOUTING (8 ITEMS): 7-8 CORRECT, P < .0351

MEAN RESPONSE LATENCIES
FOR EACH UTTERANCE TYPE, BY GRADE